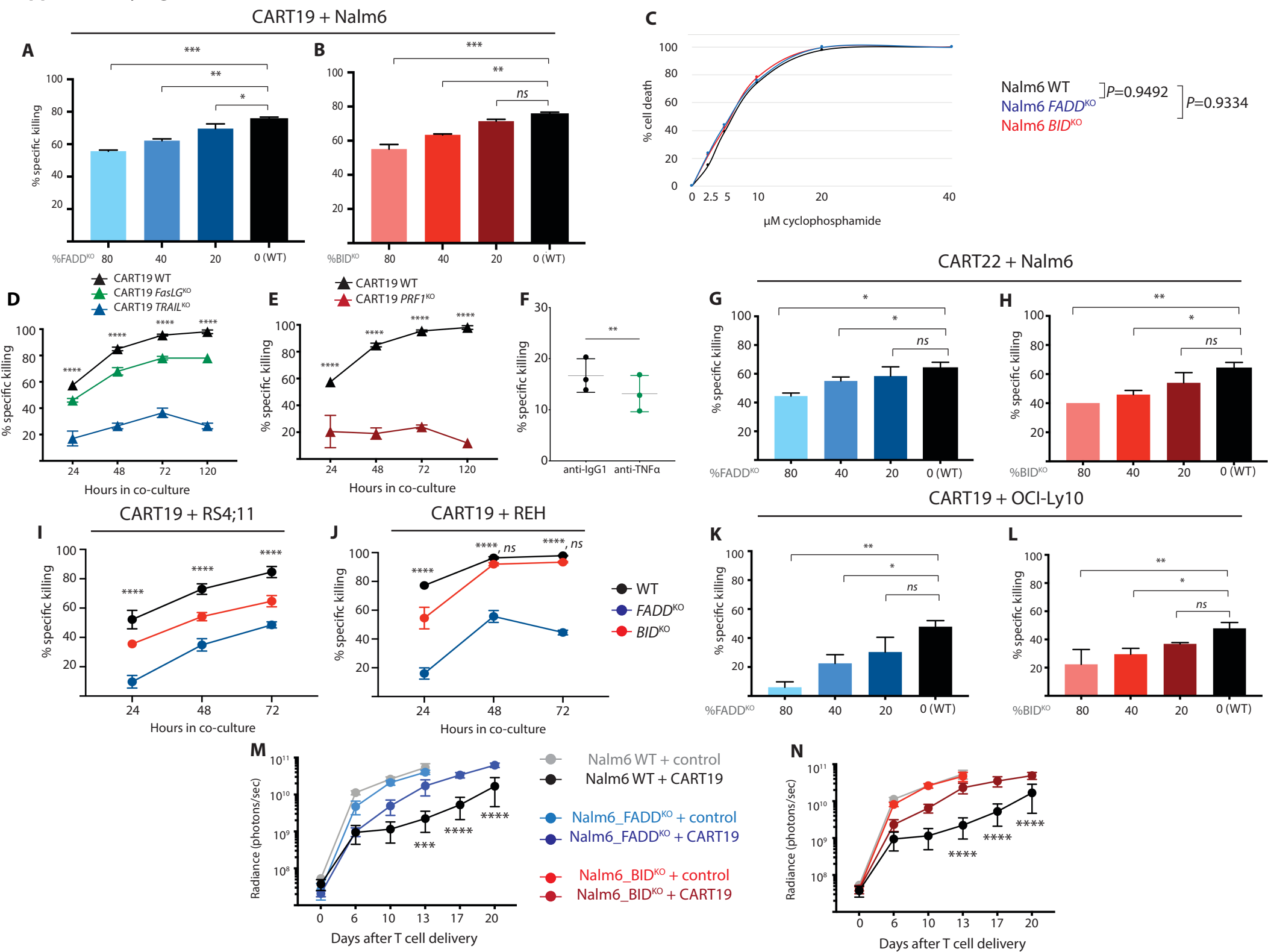


# Supplementary Figure 1



**Figure S1. Impairment of death receptor signaling results in resistance to CART19.**

(A) Nalm6 FADDKO and (B) BIDKO cells were combined with Nalm6 WT cells at progressive KO concentrations, co-cultured with CART19 and Nalm6 survival was measured after 24 hours.

(C) WT, FADDKO and BIDKO Nalm6 cells were exposed to increasing concentrations of cyclophosphamide and cell survival was measured after 24 hours.

(D) Survival of WT Nalm6 cells cultured with CART19 cells edited for loss of death receptor ligands. Significance reflects difference between WT and TRAILKO samples.

(E) Survival of WT Nalm6 cells cultured with perforin-deficient CART19.

(F) Survival of WT Nalm6 cells cultured with CART19 cells in the presence of control (anti-IgG1, 1ug/mL) or anti-TNF $\alpha$  (1ug/mL) inhibitory antibodies. E:T ratio of 0.03 CAR T cells to 1 Nalm6.

(G) Nalm6 FADDKO and (H) BIDKO cells were combined with Nalm6 WT cells at progressive KO concentrations, co-cultured with CART22 and Nalm6 survival was measured after 24 hours.

(I-J) Survival over time of WT, FADDKO and BIDKO (I) RS4;11 and (J) REH cells combined with CART19.

(K) OCI-Ly10 FADDKO and (L) BIDKO cells were combined with OCI-Ly10 WT cells at progressive KO concentrations, co-cultured with CART19 and OCI-Ly10 survival was measured after 24 hours.

(M-N) Disease progression over time in immunodeficient mice engrafted with luciferase-expressing Nalm6 (WT, BIDKO or FADDKO) after treatment with 5x10<sup>5</sup> control or CART19 cells.

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001, \*\*\*\*P<0.0001, ns: not significant